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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,756	02/20/2004	Keiji Okada	58546.00016	3747

32294 7590 09/29/2005

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,756	OKADA ET AL.	
	Examiner	Art Unit	
	Judson H. Jones	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50 and 51 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8, 15, 17, 22-25, 31, 32, 45-47 and 49 is/are rejected.
- 7) ☒ Claim(s) 4-6, 9-14, 16, 18-21, 26-30, 33-44 and 48 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>111004 + 2/20/04</u> | 6) <input checked="" type="checkbox"/> Other: <u>IDS 022004</u> |

DETAILED ACTION

Claim Objections

Claim 11 is objected to because of the following informalities: the claim recites a second and a third detector but there is no first detector in claim 11 or in claim 1 from which claim 11 depends. There is a first detector in claim 10 but claim 11 does not depend from claim 10.

Claim 15 is objected to because of the following informalities: the claim recites a second linear support guide but there is no first linear support guide in claim 15 or in claim 1 from which claim 15 depends. There is a first linear support guide in claim 14, but claim 15 does not depend from claim 14. Appropriate correction is required.

Claim 16 is objected to because of the following informalities: the claim recites a third linear support guide but there is no first or second linear support guide in claim 16 or in claim 1 from which claim 16 depends. There is a first linear support guide in claim 14 and a second linear support guide in claim 15, but claim 16 does not depend from either of those claims. Appropriate correction is required.

Claim 25 is objected to because of the following informalities: there is no antecedent basis for the second detector in claim 25 or in claims 1 and 24 from which claim 25 depends. A second detector appears in claims 11 and 12, but claim 25 does not depend on those claims. Appropriate correction is required.

Claim 32 is objected to because of the following informalities: the claim recites a second detector but there is no first detector in claim 32 or in claim 1 from which claim 32 depends. There is a first detector in claims 11 and 12, but claim 32 does not depend from either of those claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7, 8, 15, 17, 22-25, 31, 32, 45-47 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Sperling et al. 5,815,246 (cited by Applicant). Sperling et al. discloses a fixed base 67, a movable base 43, a processing base 5, a moving force generating and velocity controlling unit as described in column 12 lines 11-14 with the movable base moved in the opposite direction to the processing base as described in column 10 lines 4-31.

In regard to claim 7, while Sperling et al. does not disclose the relative weights of base 43 and base 5 but the weight can be estimated by the range of movement of the two bases. Base 5 moves from one side of base 43 to the other while base 5 “drifts” under the influence of reaction force as described in column 10 line 32 to column 11 line 2. Clearly base 43 has a greater mass than base 5.

In regard to claim 8, any mass that is at rest, moves and then returns to rest inherently has acceleration and deceleration and must have at least a short time of uniform velocity.

In regard to claim 15, see Sperling et al. column 8 lines 41-42 and see figure 3.

In regard to claim 17, see Sperling et al. column 12 lines 11-14.

In regard to claim 20, any mass that is at rest, moves and then returns to rest inherently has acceleration and deceleration and must have at least a short time of uniform velocity. A

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controller which controls the movement of such a mass would inherently control acceleration and deceleration.

In regard to claim 22, see Sperling et al. column 8 lines 30-33.

In regard to claim 23, see Sperling et al. figure 3.

In regard to claims 24, 25, 31 and 32, see Sperling et al. column 10 lines 57-60.

In regard to claims 45 and 46, see Sperling et al. column 7 lines 30-34.

In regard to claim 47, see Sperling et al. figure 2.

In regard to claim 49, see Sperling et al. column 8 lines 61-65.

Allowable Subject Matter

Claims 4-6, 9-14, 16, 18, 21, 26-30, 33-44 and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 50 and 51 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or teach a mover device where the moving velocity of the processing base uses signals generated from the P-F measuring unit and the M-F measuring unit in combination with the other features of claims 4-6. The prior art of record does not disclose or teach using a large force to start a base moving and applying a force in the opposite direction in combination with the other features of claim 9. The prior art of record does not disclose or teach detecting the moving state of a processing base with respect to the fixed base in combination with the other features of claim 10. The prior art of record does not disclose or teach a second detector that detects the moving state of the processing base with respect to the fixed

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base and a third detector that detects the moving state of the processing base with respect to the movable base and a controller that controls the moving force based on information from those detectors in combination with the other features of claims 12 and 13. Sperling et al. teaches measuring the position of a movable base relative to a fixed base. European reference 0 421 527 A1 (referred to in column 13 lines 16-18 of Sperling et al.) teaches using speed signals and acceleration signals in column 7 line 53 to column 8 line 3 but no reason has been found for measuring the speed of the motion between the fixed base and movable base. The prior art of record does not disclose or teach a movable base guided by a first linear support guide in combination with the other features of claim 14. The prior art of record does not disclose or teach a processing base guided by a guide rail on the fixed base in combination with the other features of claim 16. The prior art of record does not disclose or teach a velocity controlled unit that sets a processing base to reciprocate at a uniform velocity in combination with the other features of claims 18 and 19. Sperling et al. discloses a step and repeat system. A uniform velocity is important when the mask and wafer are both moved during scanning, not in a step and repeat system. In regard to claim 21, the prior art of record does not disclose or teach the movable base and the processing base having a center of gravity located on a predetermined point on the fixed base in combination with the other features of claim 21. The prior art of record does not disclose or teach a positional deviation correction mechanism provided in a position where the fixed base and movable base face each other in combination with the other features of claim 26. The mechanism of Sperling is provided at the side of the movable base. The prior art of record does not disclose or teach a reverse facilitating unit provided between the fixed base and movable base face each other in combination with the other features of claim 31. The prior art of record

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does not disclose or teach a tilting unit in combination with the other features of claim 48. The prior art of record does not disclose or teach a position measuring unit provided between the processing base and the fixed base in combination with the other features of claims 50 and 51. Sperling et al. appears to show position measuring between the processing base and the movable base.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H. Jones whose telephone number is 571-272-2025. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Judson H. Jones 9/13/2005



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